

Amendments to the Claims

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims

1 – 20 (Cancelled)

21. (Currently Amended) A thrombus filter for placement within a blood vessel lumen defined by a blood vessel wall, comprising:

a wall engaging portion comprised of a plurality of wall elements including a plurality of wall engaging strands;

a filtering portion comprised of a plurality of filtering strands;

a selectively releasable retainer disposed on the filtering strands;

the filtering portion being fixed to the wall engaging portion;

each wall engaging strand connected to each other wall engaging strand, either directly or solely through other wall elements; and

a catheter disposed adjacent the thrombus filter, the catheter having a lumen and a capture member,

wherein the catheter is configured to engage the selectively releasable retainer and the capture member is configured to retain the retainer within the lumen when the retainer has been released;

wherein the wall elements include a plurality of tubular members having central lumens, the plurality of the tubular members having a portion of at least one wall engaging strand in the central lumen.

22. (Previously Presented) The filter of claim 21, wherein the plurality of wall elements are attached to at least one other wall element.

23. (Previously Presented) The filter of claim 21, wherein the plurality of wall elements are arranged to define a plurality of wall engaging cells.

24. (Canceled)

25. (Previously Presented) The filter of claim 24, wherein the tubular members comprise an anchoring portion, each anchoring portion having a plurality of protrusions to anchor the tubular member to the blood vessel wall.

26. (Previously Presented) The filter of claim 21, wherein the wall elements comprise an anchoring member, each anchoring portion having a plurality of protrusions to anchor the anchoring member to the blood vessel wall.

27. (Previously Presented) The filter of claim 21, further comprising a shaft disposed within the catheter, the shaft being configured to engage the selectively releasable retainer.

28. (Previously Presented) The filter of claim 27, wherein the shaft is configured to remove the selectively releasable retainer from the filtering strands.

29. (Previously Presented) The filter of claim 28, wherein the catheter includes retaining means for maintaining the selectively releasable retainer within the catheter when the retainer is removed from the filtering strands.

30. (Previously Presented) The filter of claim 24, wherein a portion of two wall engaging strands are in the plurality of the tubular members.

31. (Currently Amended) A thrombus filter for placement within a blood vessel lumen defined by a blood vessel wall, comprising:
a plurality of wall engaging strands connected together and defining a generally cylindrical wall engaging portion;
a plurality of filtering strands each having a proximal end attached to the wall engaging portion and a distal end;

wherein the filtering strands define a filtering portion that is configured to shift between a first generally conical shape and a second generally cylindrical shape, the filtering portion being biased to be in the second generally cylindrical shape; and

a retainer releasably attached to the distal ends of the filtering strands that holds the filtering portion in the first generally conical shape; wherein the retainer includes a graspable collar;

a catheter having a lumen and a capture member, the catheter being configured to engage the retainer and the capture member being configured to retain the retainer within the lumen when the retainer has been released.

32. (Previously Presented) The filter of claim 31, wherein the retainer includes a graspable loop.

33. (Canceled)

34. (Previously Presented) The filter of claim 31, further comprising a catheter configured to engage the retainer.

35. (Previously Presented) The filter of claim 34, further comprising a shaft disposed within the catheter, the shaft being configured to engage the retainer.

36. (Previously Presented) The filter of claim 35, wherein the shaft is configured to remove the retainer from the distal ends of the filtering strands.

37. (Previously Presented) The filter of claim 36, wherein the catheter includes retaining means for maintaining the retainer within the catheter when the retainer is removed from the distal ends of the filtering strands.

38. (Currently Amended) A thrombus filter, comprising:
a cylindrical wall engaging region defined by a plurality of connected wall engaging strands;

a filtering region defined by a plurality of filtering strands each having a proximal end attached to the wall engaging portion and a distal end;

wherein the filtering region is configured to shift between a first generally conical shape and a second generally cylindrical shape, the first generally conical shape is defined by the distal ends of the filtering strands converging and being closely associated with one another, the second generally cylindrical shape is defined by the distal ends of the filtering strands diverging and separating from one another;

wherein the filtering region is biased to be in the second generally cylindrical shape;

a retainer releasably attached to the distal ends of the filtering strands that holds the filtering region in the first generally conical shape, wherein the retainer includes a graspable collar; and

a catheter configured to engage the retainer, the catheter including retaining means for maintaining the retainer within the catheter when the retainer is removed from the distal ends of the filtering strands.

39. (Previously Presented) The filter of claim 38, wherein the retainer includes a graspable loop.

40. (Canceled)

41. (Previously Presented) The filter of claim 38, further comprising a shaft disposed within the catheter, the shaft being configured to engage the retainer.

42. (Previously Presented) The filter of claim 41, wherein the shaft is configured to remove the retainer from the distal ends of the filtering strands.

43. (Currently Amended) A thrombus filter, comprising:
a cylindrical wall engaging region, wherein the wall engaging region includes a plurality of tubular members having central lumens;

a filtering region having a proximal end attached to the wall engaging portion and a distal end;

wherein the filtering region is configured to shift between a first generally conical shape and a second generally cylindrical shape, the first generally conical shape is defined when the distal end of the filtering region is closed, the second generally cylindrical shape is defined when the distal end of the filtering region is open;

wherein the filtering region is biased to be in the second generally cylindrical shape; and

means for controlling the shape of the filtering region releasably attached to the distal end of the filtering region;

a catheter configured to engage ~~[[the]]~~ a retainer, the catheter including a retaining means for maintaining the means for controlling the shape of the filtering region within the catheter when the means for controlling the shape of the filtering region is released from the distal end of the filtering region.

44. (Currently Amended) A thrombus filter, comprising:

a cylindrical wall engaging portion defined by a plurality of connected wall engaging filaments;

a filtering portion defined by a plurality of filtering filaments each having a proximal end attached to the wall engaging portion and a distal end;

wherein the filtering portion is configured to shift between a first generally conical shape and a second generally cylindrical shape;

wherein the filtering portion is biased to be in the second generally cylindrical shape;

a retainer releasably attached to the distal ends of the filtering filaments that holds the filtering portion in the first generally conical shape; and

a catheter configured to engage the retainer, the catheter including retaining means for maintaining the retainer within the catheter when the retainer is removed from the distal ends of the filtering filaments;

wherein the wall engaging portion includes a plurality of tubular members having central lumens, the plurality of the tubular members having a portion of at least one wall engaging filament in the central lumen.